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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/612,733	07/10/2000	John T. Kennedy	DES-0003	9288

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EXAMINER

JACKSON, CORNELIUS H

ART UNIT	PAPER NUMBER
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2828

DATE MAILED: 08/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/612,733

Applicant(s)

KENNEDY ET AL.

Examiner

Cornelius H. Jackson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.


- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 March 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 40-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 40-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.


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Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 13. 6) ☐ Other:

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 27 March 2003 has been entered.

Acknowledgment

2. Acknowledgment is made that applicant's Amendment, filed on 27 March 2003, has been entered. Upon entrance of the Amendment, claims 1-39 were cancelled and claims 40-51 were added. Claims 40-51 are now pending in the current application.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. Claims 40-51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claims 40-51 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: reflective mirrors, output mirror, cavity/resonator, RF power supply, etc.

6. Claims 40-51 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the position of each element with respect to one another, example being, on which side are the electrodes placed of the waveguide structure and how are the electrodes positioned with respect to the waveguide channels. Are each electrodes placed on a different side of the waveguide structure, wherein four of the ? number of sides of the waveguide structure have electrodes?

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 40-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hart et al. (6192061). Regarding claim 40, Hart et al. teach a laser **Fig. 8** comprising an elongated, dielectric waveguide structure **36** having a plurality of waveguide channels **37a-d** therein, said waveguide channels **37a-d** including a gaseous gain medium, **see col. 1, lines 5-67**; a pair of electrodes **38, 32** along said waveguide **36**, with first and second electrodes being on opposite sides of said waveguide structure **36**, said first electrode **38** in the pair being electrically connectable to an RF power supply **30** for applying an RF potential across said gain medium; a metal housing **24** enclosing said waveguide structure **36** and said electrode pair **38,32**, with said first electrode **38** being electrically isolated from the metal housing **24** and a metal shield being electrically isolated from said first electrodes and electrically connected to said metal housing, **see Figs. 42 and 43, col. 14, lines 33-67**. Hart et al. fail to teach a plurality of electrode pairs. It would have been obvious to one having ordinary skill in the art at the time the invention was made to evenly divide the electrodes to enhance the laser operational capabilities in very high continuous duty applications. Also, it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art.

Regarding claim 41, Hart et al. teach the second electrode **32** is electrically connected to the metal housing **24**.

Regarding claim 42, see rejection to claim 40 above.

Regarding claim 43, Hart et al. teach the second electrode **32** is grounded, **see Fig. 8**.

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Regarding claim 44, Hart et al. teach the second electrode **32** is electrically connected to the metal housing **24**.

Regarding claims 45-47, Hart et al. teach all the stated limitations, **see Figs, 42 and 43, col. 14, lines 33-67**.

Regarding claims 48-51, see rejections to claims above.

9. Claims 40-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vitruk et al. (5953360). Regarding claim 40, Vitruk et al. teach a laser **Figs. 1-4** comprising an elongated waveguide structure having a plurality of waveguide channels therein, said waveguide channels including a gaseous gain medium; at least two pairs of electrodes **72, 74, 76, 78 (110, 112, 114, 116)** along said waveguide, with first and second ones of said electrodes in each said pair being on respectively first and second opposite sides of said waveguide structure, said first electrode in each electrode pair being electrically connectable to an RF power supply **83 (124,128)** for applying an RF potential across said gain medium; a metal housing **52 (120)** enclosing said waveguide structure and said electrode pairs, with said first ones of said electrodes in each pair being electrically isolated from the metal housing; and a metal shield located between adjacent pairs of electrodes transverse to said waveguide structure to prevent RF coupling between said adjacent electrode pairs, said metal shield being electrically isolated from said first electrodes and electrically connected to said metal housing, **see col. 2, line 20-col. 6, line 20**. Vitruk et al. fail to teach the waveguide structure is dielectric. It has been held to be within the general skill of a worker in the art to select a

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known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding claim 41, Vitruk et al. teach the second electrode is electrically connected to the metal housing, **see Figs. 2 and 4**.

Regarding claim 42, see rejection to claim 40 above.

Regarding claim 43, Vitruk et al. teach the second electrode is grounded, **see Figs. 1, 2 and 4**.

Regarding claim 44, Vitruk et al. teach the second electrode is electrically connected to the metal housing, **see Figs. 2 and 4**.

Regarding claims 45-47, Vitruk et al. teach all the stated limitations, **see col. 2, line 20-col. 6, line 20**.

Regarding claims 48-51, see rejections to claims above.

Response to Arguments


10. Applicant's arguments with respect to claims 1-39 have been considered but are moot in view of the new ground(s) of rejection.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cornelius H. Jackson whose telephone number is (703) 306-5981. The examiner can normally be reached on 8:00 - 5:00, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-7722 for regular communications and (703)308-7721 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.


chj
July 28, 2003


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